

US EPA ARCHIVE DOCUMENT

U.S. Environmental Protection Agency, Region IX

Response to Comments

on the

Draft NPDES Permit (AS0020028) for the American Samoa Terminal

Nicholas F. King Jr. of Pacific Petroleum Company, Ltd. provided comments on EPA's draft NPDES permit in a letter sent July 23, 2010. The following are EPA's responses to Pacific Petroleum Company, Ltd.

Comment #1: Part 1.B, Items 1 to 4: Please be advised that Outfall 002 also includes storm water from the Gatavai Village behind the Terminal. Therefore the Terminal should not be held totally responsible or accountable for the final discharge into the Harbor from the 002 Outfall. The comment is to consider that the Terminal cannot control what is dumped within the Village that eventually ends up mixed in with the Terminals storm water then finally discharged at Outfall 002.

Response to Comment #1: Compliance with effluent limitations is measured at sampling points 002B/BX, 002C, 002D, and 003. Only visual monitoring is assessed at outfall 002. It is the responsibility of the permittee to establish sample monitoring locations which are representative of the discharge and are safely accessible to staff.

Comment #2: Part 1.C. Our processes do not introduce any heating elements to the storage of fuel or discharges. All storage tanks and discharges are left to ambient temperature or natural weather conditions.

Response to Comment #2: Based on this information, the permittee should be able to comply with the receiving water requirement for temperature. It is standard that we include narrative water quality standards in permits as a baseline to protect water quality. This requirement is a narrative water quality standard for Pago Pago Harbor from American Samoa's water quality standards. The permittee is required to sample for temperature at sampling points 002C and 002D, concurrent with ammonia sampling.

Comment #3: Currently we are testing the pH using litmus paper because our digital tester has been defective. This may explain the non-compliance of the pH readings (estimates). We are looking at purchasing a new digital pH tester for better accuracy and one that will include Temperature.

Response to Comment #3: Comment noted.

Comment #4: The "light penetration requirement" at Outfall 002 is beyond our control as stated before the final outfall point also includes storm water from the Gatavai Village area behind the Terminal. When it rains here, the harbor (and all of the shoreline areas where the stream enters the ocean) becomes a "chocolate sea" or brown water as can be. The soil erosion here is a major problem that will probably not be solved any time soon. The Terminal

does have natural occurring dust that ends up in our berms but nothing that would cause the “chocolate sea.”

A point the Terminal requests you consider is whether or not the Terminal be fined or held accountable for any instances that Outfall 002 may “exceed the given value 50 percent of the time” when it is something that the Terminal cannot completely control?

As per prior correspondence pertaining to the light penetration requirement, since it is a receiving water narrative water quality standard. As part of the outfall visual monitoring, the Terminal will visually observe both the outfall and the receiving water for light penetration and report the findings on the DMRs.

Response to Comment #4: It is standard that we include narrative water quality standards in permits as a baseline to protect water quality. The light penetration requirement is a narrative water quality standard for Pago Pago Harbor from American Samoa’s water quality standards. The permit includes a turbidity effluent limit. If the permittee controls the discharge to comply with the turbidity effluent limit, the discharge should be able to comply with the light penetration requirement. Specific monitoring for light penetration, other than turbidity, is not required by the permit; however, the permittee may include visual observations of light penetration in the cover letters for the discharge monitoring reports. Light penetration is usually measured with a secchi disk.

Comment #5: Table 1. Effluent Limits for Outfall No. 002 and 003: The newly added Parameters (Volatile and Semi-Volatile Organics; Remaining Priority Toxic Pollutants; Zinc; Ammonia; Total Nitrogen; Total Phosphorus; Biochemical Oxygen Demand (5-day); Chemical Oxygen Demand; Total Suspended Solids; Total Dissolved Solids; and Salinity) were added because they are “pollutants common in tank bottom water draws” based on the Technical Support Document for the 2004 Effluent Guidelines Program Plan (USEPA, 2004).

The current permit parameters were reduced from previous permit parameters because of the Minor Discharger designation and the past history of low detectable quantity results from prior parameter sampling.

The Comment is to reduce the proposed parameters to the current permit conditions, sampling parameters and times.

In addition add quarterly sampling of all the new proposed parameters for Outfalls 002 & 003 for one year; then reduce to annual sampling of the new proposed parameters for Outfalls 002 & 003.

Response to Comment #5: The permit is based on limited monitoring data from the last permit term and new information since the previous permit was issued, specifically, Page 7-92 of the Technical Support Document for the 2004 Effluent Guidelines Program Plan. This document discusses common pollutants found in tank bottom water draws at

petroleum bulk storage terminals (PBST), exclusive of refineries. These pollutants are applicable to this facility. In Section 7.12 of the Technical Support Document, EPA reviews the PBST industry for consideration as a subcategory under the refinery ELGs with its own effluent limitation guidelines.

Quarterly monitoring might be appropriate for pollutants that are common to the industry which do not demonstrate reasonable potential; however, the permittee did not perform the required monitoring over the permit term. Monthly sampling is necessary to obtain more information about the discharge, since there were very few data reports for the last permit term, and is appropriate based on the frequency of the discharges from the facility. The permit includes a clause to allow a reduction in monitoring frequency after two years of monitoring and approval by EPA.

Comment #6: Part II. Monitoring and Reporting Requirements: Process waters are actually very minimal. When we physically dip the tanks we dip for water it usually shows up as “trace” meaning not enough water to drain. This can be tracked and verified from the daily physical dip book recordings. If we do drain water from the tank the normal amount is a pint to a quart.

The water drained, rarely if at all, reaches the intake to the oil water separator (OWS). So we never open the OWS due to process water drains. The only reason OWS are opened is to drain storm water down to level that is low enough so that operators can access the tanks and valves.

If the rain water stayed at levels that we could access the tanks and valves, we would never have to open the OWS.

Response to Comment #6: The discharge resulting from the opening of the OWS to drain storm water is a permitted discharge and must be sampled in accordance with the conditions of the permit. If there is no discharge, no sampling is required and the permittee may report “no discharge” on the DMRs. The EPA inspection report states the previous permit only required sampling during storm events and that the permittee should be required to sample process wastewaters unrelated to storm events. The permit requires samples to be taken when process wastewaters, such as tank bottom water draws or hose pressure hydro test waters, are released for discharge through the sampling point. In addition, samples shall be taken when storm water discharges through the sampling point. These requirements are included to cover releases of process wastewaters, storm water, and a mixture of both process wastewater and storm water. In addition, if storm water is accumulating in the tank containment areas, the facility should make sure the secondary containment capacity is adequate to meet the requirements under their SPCC plan.

Comment #7: Part II.A.2 – Monitoring Frequency and Sample Type by Sampling Point: Comment is the Terminal requests a variance for Hold time on any parameter that has less than seven (7) days holding time requirement. The reasoning is that there are only two to

three flights a week off-island and there is no guarantee when it will rain and the Terminal can sample. Furthermore, some of the parameters must be sent to the US Mainland for testing which adds at a minimum another 24 to 48 hours to the shipment time. The samples will exceed the hold time and the results will be inaccurate.

Response to Comment #7: We understand it is difficult with only two flights a week to get samples to the lab, but as part of the QA manual, the permittee must consider and plan for timing the sampling with flight availability. The only parameter in the permit that must be analyzed by a laboratory and has a holding time less than 7 days is biochemical oxygen demand (5-day), where the holding time is 48 hours. Other permittees in American Samoa have successfully and consistently provided their samples to a mainland laboratory within 48 hours. Use of a known shipper streamlines the customs process and will help in meeting the sample holding times. We can provide a list of known shippers in Honolulu for your use.

Comment #8: Table 3,4,5 – Monitoring Requirements for Sampling Points. Request changing the “weekly” Monitoring Frequency to “Monthly” because there are no guarantees that there will be storm rainwater events weekly therefore the Terminal cannot comply with this requirement. There is more likelihood of a single storm rainwater event in a single month than there is for one to occur weekly. Even if there were weekly storm rainwater events there is no guarantee that they will be large enough to warrant a discharge through the OWS weekly. Our procedure is to only open the OWS when access to the tanks and valves is needed; otherwise the storm water in the berms is left to evaporate.

Response to Comment #8: The permit monitoring frequencies are based on the frequency of storm events and the frequency of tank bottom water draws, where the inspection report states Area C is drained daily and Area D is drained weekly. In addition, Part II.A.3.b of the permit states, “If there is no discharge, monitoring is not required.”

Comment #9: Request removing the new proposed parameters and monitoring frequencies because the past permits have effectively reduced the amount of parameters and monitoring frequencies due to the low level results of current and past permit results of detectable parameters.

The Terminal’s Permit is classified as a Minor discharger however the parameters and monitoring frequencies seem more applicable towards a refinery operation (as listed in the Technical Support Document for the 2004 Effluent Guidelines Program Plan (USEPA, 2004)) or larger bulk storage tank farm facility that does ten times more than just receiving, storing and distributing end user product.

What is the ultimate goal of requiring the Terminal to do monthly sampling of Total Nitrogen, Total Phosphorus; the Quarterly sampling of Volatile and Semi-volatile Organics & the annual Remaining Priority Toxic Pollutants? Annual monitoring is reasonable but monthly and quarterly for the new parameters appear excessive for a “Minor Discharger” that

does nothing but receive, store and distribute clean white final end user product when compared to a refinery.

Response to Comment #9: Please see response to comment #5. In addition, discharge concentrations of Total Nitrogen and Total Phosphorus provided in the monitoring data have reasonable potential to exceed water quality standards. Thus, effluent limits and monitoring are included in the permit. Quarterly monitoring for volatile and semi-volatile organics will provide sufficient data to determine if discharge concentrations of any of these pollutants, which could be present in a discharge from a PBST, exceed or have the reasonable potential to exceed water quality standards.

Comment #10: Quality Assurance (QA) Manual. Please be advised that the Terminal Operation is currently out to bid and Pacific Energy SWP Ltd. Is the interim Terminal Operator which officially bought out BP SWP Ltd. On May 24, 2010. Pacific Energy SWP Ltd. in the interim is responding to this NPDES Permit comment period on behalf of the future Terminal Operator. Thus, any time period limits to implementing requirements should consider the Terminal Operation award date for the New Operator.

Response to Comment #10: The permittee must notify EPA of any changes in ownership 30 days prior to the proposed transfer. The notice must include a written agreement between the current permittee and the new permittee containing a specific date for transfer of permit responsibility, coverage, and liability between them. Any extensions to the submittal deadlines in the permit must be formally requested in advance.

Comment #11: As mentioned earlier the process waters do not have enough quantities to warrant opening the OWS for a discharge. We pay extra to ship via DHL because there is no delivery or pick up service to the lab that we currently use. We have had little success in response from AECOS in Hawaii; Test America has had the best response. Any use of a lab on the continental US mainland will guarantee samples will arrive out of Temp. or out of hold time upon arrival. We are at the mercy of Mother Nature when it comes to rain fall, the scheduling of sampling discharges and timing to ship with the two/three a week flights off island.

Response to Comment #11: Please see responses to comments #7 and #8. The QA manual should include procedures for timing the sampling with flight availability and best practices for keeping the samples at temperature requirements.

Comment # 12: Priority Toxic Pollutants Scan. As mentioned above we request to continue the current permit parameters and sampling frequencies in addition to a quarterly sampling of the Volatile and Semi-volatile organic compounds and priority toxic pollutants at Outfalls 002 and 003 for one year and then reduce to annual sampling for Outfalls 002 & 003.

Response to Comment #12: Please see response to comment #5.

Comment #13: Outfall Visual Monitoring. Outfall 003 is located underneath the fuel dock and at least 20 to 30 feet from the face edge of the dock deck. It cannot be seen from the deck of the dock. Only a visual of the waters surrounding the Fuel Dock deck are doable. Request the visual of Outfall 003 be changed to “waters around the Outfall 003 discharge area from the Fuel Dock Deck.” Request there be a section on the DMR for this observation report/note.

Response to Comment #13: The visual monitoring at outfall 003 for oily sheen, foam, or other floatables may be performed at the edges of the dock. The permittee should include a summary of the observations as comments on the DMRs or in the cover letter to the DMRs.

Comment #14: Part III Reopener Provisions. There is no mention or potential or possibility of permit modification to reduce effluent limits, monitoring, or other conditions...etc. Can it be reopened to reduce parameters or frequencies after a year or two?

Response to Comment #14: Under the monitoring and reporting tables, the permit includes the following clause for benzene, toluene, xylene, ammonia, BOD, COD, TSS, and TDS:

“After two years from the effective date of this permit, if the permittee has performed all monitoring in accordance with the conditions of this permit, results indicate concentrations in the effluent do not demonstrate reasonable potential to exceed water quality standards, and upon approval by EPA, monitoring frequency for this parameter may be reduced to quarterly.”

The permit also includes the following clause for volatile and semi-volatile organics:

“After two years from the effective date of this permit, if the permittee has performed all monitoring in accordance with the conditions of this permit, results indicate concentrations in the effluent do not demonstrate reasonable potential to exceed water quality standards, and upon approval by EPA, monitoring frequency for this parameter may be reduced to semi-annually.”

Fact Sheet Comments

Comment #15: V. Significant Changes to Previous Permit, A. NPDES Permit Points of Compliance. “Rarely self-monitored due to sampling difficulty posed by low flows” were also due to the fact that the old sampling point at the OWS were in “confined spaces” as defined and regulated by OSHA & BP Safety Standards. Entry permits were required for every sampling attempt and due to the unpredictability of the weather, permit authorities not available to issue the entry permit, schedule conflicts with other scheduled work...it was very difficult to get the sampling done. After the AO follow up visit a solution was agreed upon with the EPA Inspector & the Terminal Operator to cut a 4” hold in the elbow of the outlet

pipe of the OWS to eliminate the need to enter the confined space for sampling. Thus, the easier sampling process.

Response to Comment #15: Comment noted.

Comment #16: C. Monitoring. Daily and weekly tank bottom water draw operations are only performed if needed. The daily physical dip book tracks whether there is a presence of water or not. Normal note is “trace” amounts meaning the water present is emulsified in with the fuel and cannot be drained. If the water is measurable in inches (1/32”, 1/16”, 1/8”...etc.) then an attempt will be made to drain the tank.

All in service tanks are checked daily for water. Diesel and Unleaded Gasoline tanks are weekly draws if necessary. Jet tanks are daily draws if necessary. The amount normally draw is from less than a pint to a quart of water.

We have dedicated lines at the Terminal & Fuel Dock therefore we do not need water plugs in between products as other terminals do because they have only one pipeline to service the fuel dock and Terminal tanks.

This means no water is introduced into our storage system/tanks. The only water we accumulate is from condensation on the interior walls and roof of the tanks. This is why we have very little process water from the water draws.

The hydro testing of the hoses occurs annually and the amount of water is less than 150 gallons per hose test. This does not require, nor has it ever required, the OWS to be opened for discharge.

Since the additional parameters are based on the tank bottom water draws we request the removal of the additional parameters of xylene, ammonia, biochemical oxygen demand, chemical oxygen demand, total suspended solids, total dissolved solids and salinity.

If you still feel you must require all of them monitored then an annual sampling would seem reasonable.

Response to Comment #16: Please see responses to comments #5 and #6.

Comment #17: VI Determination of Numerical Effluent Limitations. A. Applicable Technology-based Effluent Limitations. Request removal of “Biochemical oxygen demand (BOD), chemical oxygen demand (COD), total suspended solids (TSS), and Total dissolved solids (TDS) at sampling points 002C and 002D, as they are commonly found in tank bottom water draws (USEPA 2004) because as stated above the limited quantities of water from our water draws and the difference between our tanks storage and that of the refineries.

Response to Comment #17: Please see response to comment #5.

Comment #18: 2. Dilution in the receiving water. What is “an approved mixing zone”? Can you forward the application for us to look at and determine if this is something we should do?

Response to Comment #18: Based on how the permittee discharges to Pago Pago Harbor, the permittee would not qualify for a mixing zone. The American Samoa Water Quality Standards (Section 24.0207(b)), states: “a zone of mixing shall not be granted if it would include the surface of the water body, any part of the shoreline, or any part of any barrier or fringing reef.” This requirement would exclude the permittee from qualifying for a mixing zone.

Comment #19: C. Rationale for Effluent Limits – Reasonable Potential Analysis.

Oil & Grease: Weekly visual monitoring for sheen and floatables at the time of discharge at outfalls 002 and 003...we cannot observe outfall 003 under the fuel dock; request 002 visual monitoring during day of sampling discharge or monthly.

Response: See response to comment #13. Weekly visual monitoring is required at both outfalls 002 and 003. Monthly sampling for oil & grease is required at all sampling points (002B/BX, 002C, 002D, and 003).

pH: request monthly pH at sampling points because there is no guarantee of weekly rainfall or discharges from the outfalls.

Response: See response to comment #8.

Turbidity: request monthly turbidity during sampling points because there is no guarantee of weekly rainfall or discharges from the outfalls.

Response: See response to comment #8

Lead: request quarterly sampling for lead as prior sampling results for past and current permits had no exceedances of lead discharge.

Response: Monthly monitoring is appropriate for pollutants in the discharge that demonstrate reasonable potential to exceed water quality standards. Monitoring data showed that discharge concentrations of lead exceeded water quality standards.

Zinc: request quarterly sampling for the new parameter instead of monthly.

Response: Monthly monitoring is appropriate for pollutants in the discharge that demonstrate reasonable potential to exceed water quality standards. Monitoring data showed that discharge concentrations of zinc have reasonable potential to exceed water quality standards.

Benzene: request to sample annually because the “reasonable potential analysis showed no potential for the discharge to cause or contribute to an exceedance for benzene.”

Response: Benzene is commonly present in refined oil products. Monthly sampling for benzene is necessary to obtain more information about the discharge, since there were very few data reports for the last permit term, and is appropriate based on the frequency of the discharges from the facility. The permit includes a clause to allow a reduction in monitoring frequency to quarterly (see response to comment #14).

Ethylbenzene: request to sample quarterly instead of monthly (better if annual with benzene). Current permit required annual sampling.

Response: Monthly monitoring is appropriate for pollutants in the discharge that demonstrate reasonable potential to exceed water quality standards. Monitoring data showed that discharge concentrations of ethylbenzene have reasonable potential to exceed water quality standards.

Toluene: request to sample annually because “the reasonable potential analysis showed no potential for the discharge to cause or contribute to an exceedance for Toluene.”

Response: Toluene is commonly present in refined oil products. Monthly sampling for toluene is necessary to obtain more information about the discharge, since there were very few data reports for the last permit term, and is appropriate based on the frequency of the discharges from the facility. The permit includes a clause to allow a reduction in monitoring frequency to quarterly (see response to comment #14).

Xylene: request to sample annually because the current permit does not require monitoring for Xylene and the limited quantities of process water produced.

Response: Xylene is commonly present in refined oil products. Monthly sampling for xylene is necessary to obtain more information about the discharge and is appropriate based on the frequency of the discharges from the facility. The permit includes a clause to allow a reduction in monitoring frequency to quarterly (see response to comment #14).

Ammonia: request to sample annually because the current permit does not require monitoring for Ammonia and the limited quantities of process water produced.

Response: Ammonia is a common pollutant found in tank bottom water draws. Monthly sampling for ammonia is necessary to obtain more information about the discharge and is appropriate based on the frequency of the discharges from the facility. The permit includes a clause to allow a reduction in monitoring frequency to quarterly (see response to comment #14).

Total Nitrogen as N: request to sample annually because the current permit does not require monitoring for Total Nitrogen as N and the limited quantities of process water produced.

Response: Monthly monitoring is appropriate for pollutants in the discharge that demonstrate reasonable potential to exceed water quality standards. Monitoring data showed that discharge concentrations of total nitrogen exceeded water quality standards.

Total Phosphorus as P: request to sample annually because the current permit does not require monitoring for Total Phosphorus as P and the limited quantities of process water produced.

Response: Monthly monitoring is appropriate for pollutants in the discharge that demonstrate reasonable potential to exceed water quality standards. Monitoring data

showed that discharge concentrations of total phosphorus exceeded water quality standards.

BOD, COD, TSS, TDS, and Salinity: request to sample annually because the current permit does not require monitoring for BOD, COD, TSS, TDS, and Salinity and the limited quantities of process water produced.

Response: BOD, COD, TSS, and TDS are common pollutants found in tank bottom water draws. Monthly sampling for these pollutants is necessary to obtain more information about the discharge and is appropriate based on the frequency of the discharges from the facility. The permit includes a clause to allow a reduction in monitoring frequency to quarterly (see response to comment #14). Monthly salinity monitoring by refractometer, a simple field test, is also included to assess the salt levels in the process wastewaters.

Comment #20: The sample records show from prior permits to the current permit that pollutant levels are below permit requirements. Reasonable potential analysis would illustrate that this trend should continue. The March 2008 USEPA Inspection report states that “the facility seemed well run, employing a number of operational and design controls to minimize the loss of product into the wastewater with consistent certification of the facility’s pollution prevention plan.” This fact coupled with the new sampling points at the OWS which makes it easier to sample during discharges will ensure unproblematic monitoring compliance with the NPDES Permit. The only weak point in meeting the NPDES Permit will be in the timely shipment of the samples for testing. This is something that is inherent with our remote location and limited local technical lab expertise. If the ultimate goal is to reduce the amount of pollutants discharge into Pago harbor then the sample records past and present prove the current 2003 NPDES permit parameters and frequency are adequate. There is a bigger picture when evaluating the discharges into the Pago harbor. We only have to look at comparing the Terminal’s regulated discharge results to that which comes out of the rest of the Pago Harbor unregulated discharges (ie. Village streams). Truthfully, there is no comparison; the Village Streams are the bigger problem.

Response to Comment #20: Comments addressed above.